

Environmental Profile

This LCA is calculated according to: ISO 14044, ISO 14040 and EN 15804

Ecochain v3.5.64



Product: 3067752 - SiTech+ Branch Reduced STEA 45° 75X50
 Unit: 1 piece
 Manufacturer: Wavin - IT - SM Maddalena

LCA standard: EN15804+A2 (2019)
 Standard database: Worldwide - Ecoinvent v 3.6 Cut-Off
 Externally verified: Yes
 Issue date: 24-11-2022
 End of validity: 24-11-2027
 Verifier: Martijn van Hövell - SGS Search



Wavin SiTech+ is a waste water system made of mineral- reinforced polypropylene (PP), which offers increased durability, but more importantly is quiet and easy to install.

This LCA was evaluated according to EN15804+A2. It was concluded that the LCA complies with this standard.

The LCA background information and project dossier have been registered in the online Ecochain application in the account Wavin - IT - SM Maddalena (2020). (☑ = module declared, MND = module not declared).

A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
☑	☑	☑	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	☑	☑	☑	☑

Product stage

A1 Raw material supply A2 Transport A3 Manufacturing

Construction process stage

A4 Transport gate to site
 A5 Assembly / Construction installation process

Use stage

B1 Use B2 Maintenance B3 Repair B4 Replacement B5 Refurbishment
 B6 Operational energy use B7 Operational water use

End-of-Life stage

C1 De-construction demolition C2 Transport C3 Waste processing
 C4 Disposal

Benefits and loads beyond the system boundaries

D Reuse- Recovery- Recycling- potential

Environmental impacts and parameters

GWP-total = EF Climate Change [kg CO2 eq]; **GWP-f** = EF Climate change - Fossil [kg CO2 eq]; **GWP-b** = EF Climate Change - Biogenic [kg CO2 eq]; **GWP-luluc** = EF Climate Change - Land use and LU change [kg CO2 eq]; **ODP** = EF Ozone depletion [kg CFC11 eq]; **AP** = EF Acidification [mol H+ eq]; **EP-fw** = EF Eutrophication, freshwater [kg P eq]; **EP-m** = EF Eutrophication, marine [kg N eq]; **EP-T** = EF Eutrophication, terrestrial [mol N eq]; **POCP** = EF Photochemical ozone formation [kg NMVOC eq]; **ADP-mm** = EF Resource use, minerals and metals [kg Sb eq]; **ADP-f** = EF Resource use, fossils [MJ]; **WDP** = EF Water use [m3 depriv.]; **PM** = EF Particulate matter [disease inc.]; **IR** = EF Ionising radiation [kBq U-235 eq]; **ETP-fw** = EF Ecotoxicity, freshwater [CTUe]; **HTP-c** = EF Human toxicity, cancer [CTUh]; **HTP-nc** = EF Human toxicity, non-cancer [CTUh]; **SQP** = EF Land use [Pt]; **PERE** = Use of renewable primary energy excluding renewable primary energy resources used as raw materials [MJ]; **PERM** = Use of renewable primary energy resources used as raw materials [MJ]; **PERT** = Total use of renewable primary energy resources [MJ]; **PENRE** = Use of non-renewable primary energy excluding non-renewable primary energy resources used as raw materials [MJ]; **PENRM** = Use of non-renewable primary energy resources used as raw materials [MJ]; **PENRT** = Total use of non-renewable primary energy resources [MJ]; **PET** = Total energy [MJ]; **SM** = Use of secondary material [kg]; **RSF** = Use of renewable secondary fuels [MJ]; **NRSF** = Use of non-renewable secondary fuels [MJ]; **FW** = Use of net fresh water [m3]; **HWD** = Hazardous waste disposed [kg]; **NHWD** = Non-hazardous waste disposed [kg]; **RWD** = Radioactive waste disposed [kg]; **CRU** = Components for re-use [kg]; **MFR** = Materials for recycling [kg]; **MER** = Materials for energy recovery [kg]; **EE** = Exported energy [MJ]; **EET** = Exported energy thermic [MJ]; **EEE** = Exported energy electric [MJ]

Statement of Confidentiality

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Results

Environmental impact	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
GWP-total	kg CO2 eq	4.68E-1	8.28E-3	3.27E-2	5.09E-1	5.97E-3	2.90E-1	2.90E-3	-2.77E-1	5.31E-1
GWP-f	kg CO2 eq	5.25E-1	8.27E-3	2.80E-2	5.61E-1	5.97E-3	2.16E-1	2.90E-3	-3.12E-1	4.74E-1
GWP-b	kg CO2 eq	-5.72E-2	5.02E-6	2.36E-3	-5.48E-2	3.62E-6	7.42E-2	2.56E-6	3.47E-2	5.41E-2
GWP-luluc	kg CO2 eq	3.76E-4	2.93E-6	2.36E-3	2.74E-3	2.11E-6	3.37E-5	4.91E-8	-3.29E-4	2.45E-3
ODP	kg CFC11 eq	2.38E-8	1.91E-9	2.81E-9	2.85E-8	1.38E-9	4.86E-9	7.31E-11	-1.55E-8	1.93E-8
AP	mol H+ eq	2.03E-3	4.71E-5	1.13E-4	2.19E-3	3.40E-5	2.03E-4	1.75E-6	-9.87E-4	1.45E-3
EP-fw	kg P eq	1.05E-5	6.80E-8	4.35E-7	1.10E-5	4.91E-8	9.86E-7	2.26E-9	-6.45E-6	5.55E-6
EP-m	kg N eq	3.73E-4	1.69E-5	1.91E-5	4.09E-4	1.22E-5	6.12E-5	1.31E-6	-1.90E-4	2.94E-4
EP-T	mol N eq	4.10E-3	1.86E-4	2.14E-4	4.50E-3	1.34E-4	6.73E-4	7.09E-6	-2.13E-3	3.18E-3
POCP	kg NMVOC eq	1.75E-3	5.31E-5	6.66E-5	1.87E-3	3.83E-5	2.10E-4	2.65E-6	-8.66E-4	1.26E-3
ADP-mm	kg Sb eq	2.44E-5	2.14E-7	6.82E-7	2.53E-5	1.54E-7	7.88E-7	1.75E-9	-2.73E-6	2.35E-5
ADP-f	MJ	1.77E+1	1.27E-1	3.68E-1	1.82E+1	9.16E-2	6.05E-1	5.34E-3	-9.19E+0	9.67E+0
WDP	m3 depriv.	3.51E-1	3.90E-4	1.30E-1	4.81E-1	2.81E-4	1.18E-2	2.44E-5	-2.00E-1	2.93E-1
PM	disease inc.	2.06E-8	7.46E-10	1.13E-9	2.25E-8	5.39E-10	3.24E-9	3.67E-11	-1.08E-8	1.55E-8
IR	kBq U-235 eq	1.39E-2	5.55E-4	3.44E-4	1.48E-2	4.00E-4	1.87E-3	2.49E-5	-6.70E-3	1.04E-2
ETP-fw	CTUe	7.82E+0	1.03E-1	5.81E-1	8.50E+0	7.44E-2	7.76E-1	4.97E-3	-4.01E+0	5.35E+0
HTP-c	CTUh	1.65E-10	3.67E-12	3.10E-11	1.99E-10	2.65E-12	8.13E-11	1.30E-13	-8.80E-11	1.96E-10
HTP-nc	CTUh	4.00E-9	1.23E-10	6.43E-10	4.76E-9	8.87E-11	1.03E-9	2.99E-12	-2.17E-9	3.72E-9
SQP	Pt	7.15E+0	1.09E-1	6.71E-2	7.33E+0	7.84E-2	4.73E-1	1.37E-2	-1.08E+1	-2.86E+0
Resource use	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
PERE	MJ	1.28E+0	1.82E-3	1.27E+0	2.56E+0	1.31E-3	2.91E-2	2.11E-4	-1.88E+0	7.07E-1
PERM	MJ	0	0	0	0	0	0	0	0	0
PERT	MJ	1.28E+0	1.82E-3	1.27E+0	2.56E+0	1.31E-3	2.91E-2	2.11E-4	-1.88E+0	7.07E-1
PENRE	MJ	1.89E+1	1.35E-1	4.02E-1	1.95E+1	9.73E-2	6.45E-1	5.66E-3	-9.90E+0	1.03E+1
PENRM	MJ	0	0	0	0	0	0	0	0	0
PENRT	MJ	1.89E+1	1.35E-1	4.02E-1	1.95E+1	9.73E-2	6.45E-1	5.66E-3	-9.90E+0	1.03E+1
PET	MJ	2.02E+1	1.37E-1	1.68E+0	2.20E+1	9.86E-2	6.74E-1	5.87E-3	-1.18E+1	1.10E+1
SM	kg	0	0	0	0	0	0	0	0	0
RSF	MJ	0	0	0	0	0	0	0	0	0
NRSF	MJ	0	0	0	0	0	0	0	0	0
FW	m3	5.83E-3	1.44E-5	3.10E-3	8.94E-3	1.04E-5	3.98E-4	6.60E-6	-3.62E-3	5.74E-3

Output flows and waste categories	Unit	A1	A2	A3	A1-A3	C2	C3	C4	D	Total
HWD	kg	3.63E-6	3.25E-7	3.58E-7	4.31E-6	2.34E-7	1.05E-6	6.41E-9	-3.07E-6	2.53E-6
NHWD	kg	2.97E-2	7.87E-3	3.49E-3	4.11E-2	5.68E-3	3.02E-2	2.35E-2	-1.18E-2	8.87E-2
RWD	kg	1.44E-5	8.63E-7	3.82E-7	1.56E-5	6.23E-7	2.40E-6	3.49E-8	-6.35E-6	1.24E-5
CRU	kg	0	0	0	0	0	0	0	0	0
MFR	kg	0	0	0	0	0	0	0	0	0
MER	kg	0	0	0	0	0	0	0	0	0
EE	MJ	0	0	0	0	0	0	0	0	0
EET	MJ	0	0	0	0	0	0	0	0	0
EEE	MJ	0	0	0	0	0	0	0	0	0



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